Missouri Department of Natural Resources

PUBLIC NOTICE

DRAFT MISSOURI STATE OPERATING PERMIT

DATE: September 15, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed permit conditions are invited to submit them in writing to the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Suite A, Macon, MO 63552-2602, ATTN: G. Irene Crawford. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by October 16, 2006 or received in our office by 5:00 p.m. on October 19, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, http://www.dnr.mo.gov/env/wpp/index.html , or at the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Suite A, Macon, MO 63552-2602, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

Public Notice Date: September 15, 2006 Permit Number: MO-0095222 Northeast Regional Office	
FACILITY NAME AND ADDRESS	**NAME AND ADDRESS OF OWNER**
Rocheport Wastewater Treatment Facility Columbia Street, Rocheport, MO 65279	City of Rocheport 108 Central, Rocheport, MO 65279
RECEIVING STREAM & LEGAL DESCRIPTION	**TYPE OF DISCHARGE**
Moniteau Creek NW¼, SW¼, Sec 1, T48N, R15W Boone County	Domestic, reissue

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0095222
Owner:	City of Rocheport
Address:	108 Central, Rocheport, MO 65279
Continuing Authority:	Boone County Regional Sewer District
Address:	1314 North 7th Street, Columbia, MO 65201
Facility Name:	Rocheport Wastewater Treatment Facility
Address:	Columbia Street, Rocheport, MO 65279
Legal Description:	NW ¼, SW ¼, Sec 1, T48N, R15W; Boone County
Latitude/Longitude:	+3858563/-09233470
Receiving Stream:	Moniteau Creek (P)
First Classified Stream and ID:	Moniteau Creek (P) (00754)
USGS Basin & Sub-watershed No.:	(10300102 – 070002)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC # 4952
Oxidation ditch/ sludge disposal is by contract hauler or by owner.
Design population equivalent is 380.
Design flow is 30,400 gallons per day.
Actual flow is 12,000 gallons per day.
Design sludge production is 6 dry tons/year.
.
This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Expiration Date

G. Irene Crawford, Director, Northeast Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until four (4) years and 364-days from the issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	Once/ month	24 hr est.
Temperature	°C	*		*	Once/ month	grab
Biochemical Oxygen Demand$_5$**	mg/L		45	30	Once/ month	Composite***
Total Suspended Solids**	mg/L		45	30	Once/ month	Composite***
pH – Units	SU	****		****	Once/ month	grab
Ammonia as N						
May 1 - Oct 31	mg/L	12.8		6.4	Once/ month	grab
Nov 1 – Apr 30	mg/L	12.8		6.4	Once/ month	grab
Oil & Grease	mg/L	15		10	Once/ month	grab
Fecal Coliform (Note 1)	colonies/ 100 mL	*		*	Once/ month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* - Monitoring requirement only.
** - This facility is required to meet a removal efficiency of 85% or more.
*** - A composite sample made up from a minimum of four grab samples collected within a 24-hour period with a minimum of two hours between each grab sample.
**** - pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

Note 1 – Final limitations and monitoring requirements for Fecal Coliform and Total Residual Chlorine are applicable only during the recreational season from April 1 through October 31.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	Once/ month	24 hr est.
Temperature	ºC	*		*	Once/ month	grab
Biochemical Oxygen Demand$_5$**	mg/L		45	30	Once/ month	Composite***
Total Suspended Solids**	mg/L		45	30	Once/ month	Composite***
pH – Units	SU	****		****	Once/ month	grab
Ammonia as N						
May 1 - Oct 31	mg/L	12.8		6.4	Once/ month	grab
Nov 1 – Apr 30	mg/L	12.8		6.4	Once/ month	grab
Oil & Grease	mg/L	15		10	Once/ month	grab
Fecal Coliform (Note 1)	colonies/ 100mL	1000		400	Once/ month	grab
Total Residual Chlorine (TRC) (Note 1 and Note 2)	mg/L	0.019 (.13ML)		0.010 (.13ML)	Once/ month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* - Monitoring requirement only.
** - This facility is required to meet a removal efficiency of 85% or more.
*** - A composite sample made up from a minimum of four grab samples collected within a 24-hour period with a minimum of two hours between each grab sample.
**** - pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

Note 1 – Final limitations and monitoring requirements for Fecal Coliform and Total Residual Chlorine are applicable only during the recreational season from April 1 through October 31.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

a. This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500-CL G. from Standard Methods for the Examination of Water and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

STANDARD CONDITIONS -Continued

b. Disinfection is required year-round unless the permit specifically states that "Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31." If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list. The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Report as no-discharge when a discharge does not occur during the report period.

6. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;

SPECIAL CONDITIONS – continued

(4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
(5) There shall be no significant human health hazard from incidental contact with the water;
(6) There shall be no acute toxicity to livestock or wildlife watering;
(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
   (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
   (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

D. SCHEDULE OF COMPLIANCE

1. The final daily maximum and monthly average Fecal Coliform limits of 400/100ml and 1000/100ml , respectively, shall become effective one day prior to the expiration date of the permit or December 31, 2013, whichever comes first unless items (b) or (c) below are approved by the Department. The Effluent Regulation, 10 CSR 20 – 7.015(9)(H), allows the permittee up to five years from the issuance date of this permit to:
   (a) Install disinfection facilities, or;
   (b) Present an evaluation to show that disinfection is not required to protect one or both recreational uses, or;
   (c) Present a Use Attainability Analysis (UAA) that demonstrates one or both designated recreational uses are not attainable in the classified waters receiving the effluent.

2. If chlorination is the chosen method of disinfection, a Total Residual Chlorine limit will apply.

Date of Fact Sheet: August 2, 2006

Date of Public Notice: September 15, 2006

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0095222

FACILITY NAME: Rocheport WWTF

OWNER NAME: City of Rocheport

LOCATION: Sec. 1 T48N R 15W County: Boone

RECEIVING STREAM: Moniteau Creek (P)

FACILITY CONTACT PERSON: Dwayne Cooksey, BCSD TELEPHONE: (573) 441-0098

FACILITY DESCRIPTION

Oxidation ditch/ sludge disposal is by contract hauler or by owner.
Design population equivalent is 380.
Design flow is 30,400 gallons per day.
Actual flow is 12,000 gallons per day.
Design sludge production is 6 dry tons/year.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, protection of aquatic life and whole body contact recreation.

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations are being established under federal and state laws.

EFFLUENT LIMIT DERIVATION & RATIONALE

A Water Quality Review Sheet was developed. The facility is less than two miles from Moniteau Creek, a (P) stream. No Use Attainability Analysis has been submitted for Moniteau Creek in Boone County, therefore WBCR requirements are automatically applied. A five- year Schedule of Compliance has been included for Fecal Coliform. In the event that chlorination is chosen for disinfection, a Total Residual Chlorine limit will apply.

Temperature monitoring and Ammonia limits have been added due to the adoption of the U. S. Environmental Protection Agency's "1999 Update of Ambient Water Quality Criteria for Ammonia". Oil and Grease limits have been added. All POTWs in Missouri will receive limits for Oil & Grease at permit renewal. POTWs have multiple sources of Oil & Grease in their collection systems, from residential and commercial connections.

This permit will be issued for a period of five years.

Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
NPDES Permits and Engineering Section

Water Quality Review Sheet
Determination of Effluent Limits

Facility Information

Facility Name: Rocheport Wastewater Treatment Facility NPDES #: MO-0095222

Facility Type/Description: Secondary/ Oxidation Ditch/ Sludge disposal is by contract hauler.

Ecoregion: Interior River Valleys & Hills 8- Digit HUC: 10300102 County: Boone

Central Irregular Plains Interior River Valleys and Hills Ozark Highlands
Mississippi Alluvial & Loess Plains Western Corn Belt Plains

Legal Description: NW¼, SW¼, Sec 1, T48N, R15W Latitude/Longitude: +3858563/-09233471

Water Quality History: No violations, no excursions.

Outfall Characteristics

Outfall	Design Flow (cfs)	Treatment Type	Receiving Waterbody	Other
001	0.0471	Secondary	Moniteau Creek	

Receiving Waterbody Information

Waterbody	Class	7Q10 (cfs)	*Designated Uses	Other Characteristics
Moniteau Creek	P	0.1	LWW, AQL, BTG,WBC	WBID:00754

*Cool Water Fishery (CLF), Cold Water Fishery (CDF), Irrigation (IRR), Industrial (IND), Boating & Canoeing (BTG), Drinking Water Supply (DWS), Whole Body Contact Recreation (WBC), Protection of Warm water Aquatic Life and Human Health (AQL), Livestock & Wildlife Watering (LWW)

Comments: Rocheport WWTF discharges to Moniteau Creek, a class "P" stream.

MIXING CONSIDERATIONS

+

Q10 Calculations: The 7Q10 of a stream is the average minimum flow for Seven (7) consecutive days that has a probable recurrence interval of once-in-ten years. The 1Q10 and 30Q10 are similarly derived for time periods of 1 day and 30 days, respectively. Stream flow data was not available for Moniteau Creek in the vicinity of the subject facility discharge. Stream flow data that was available at an upstream location (USGS 06909500) has a 7Q10 of 0. However Moniteau Creek transitions from a class "C" to a class "P" stream in the interval. While the flow at the point of confluence with the discharge stream may be double vs the point of gaging near Fayette, MO., based upon a comparison of the size of the drainage areas, doubling "0" is no help in establishing a value for the Q10's. Therefore default values have been assumed for 1Q10, 7Q10 and 30Q10. The background ammonia value is 0.01 mg/L.

	Flow (cfs)	MZ (cfs)	ZID (cfs)
1Q10	0.1	0.025	0.0025
7Q10	0.1	0.025	0.0025
30Q10	1.0	0.25	0.025

Permit Limits and Information

TMDL Watershed: (Y or N) [N]

W.L.A. Study Conducted: (Y or N) [N]

Disinfection Required: (Y or N) [Y]

Use Attainability Analysis: (Y or N) [N]

OUTFALL# 001

Wet Test (Y or N): [N] Frequency: N/A A.E.C. N/A Limit: N/A

PARAMETER	Daily Maximum	Weekly Average	Monthly Average	Monitoring Frequency
Flow (MGD)*	Monitor			once/month
BOD_5 (mg/L)		45	30	once/month
TSS (mg/L)		45	30	once/month
pH (S.U.)	6-9		6-9	once/month
Fecal Coliform (# colonies/ 100mL)	1000		400	once/month
Total Residual Chlorine (mg/L)	0.019		0.010	once/month
Ammonia (mg/L) May 1 – Oct 31	12.8		6.4	once/month
Ammonia (mg/L) Nov 1 – Apr 30	12.8		6.4	once/month
Temperature (°C)	Monitor			once/month

Please report the date, time, and location for each parameter sampled along with the average daily flow (actual flow measured or estimated, not design flow). All the parameters should be sampled on the same day and within no more than a 2-hour period. If dissolved oxygen (DO) is to be sampled, sampling should take place within 1 hour of sunrise. If discharge is contingent to storm events, rainfall should be measured every time there is a discharge.

Receiving Water Monitoring Requirements

There is no instream monitoring recommended at this time.

Derivation and Discussion of Limits

BOD_5, TSS, pH

10 CSR 20-7.015(8)(B) 1.-2.

Fecal Coliform

400 colonies/ 100 ml monthly average, 1000 colonies/ 100 ml daily maximum from April 1 to October 31 [10 CSR 20-7.015 (8) (B) 4.]

Total Residual Chlorine

Warm water chronic criteria of 10 µg/L and acute criteria of 19 mg/L [10 CSR 20-7.031, Table A}

Temperature

Monitoring for temperature is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

Oil and Grease

All POTWs in Missouri will receive limits for Oil & Grease at permit renewal. POTWs have multiple sources of Oil & Grease in their collection systems, from residential and commercial connections.

AMMONIA AS NITROGEN

Wasteload allocations were calculated using water quality criteria and the dilution equation below:

$$C = \frac{(C_s * Q_s) + (C_e * Q_e)}{(Q_e + Q_s)}$$ (EPA/505/2-90-001, Section 4.5.5)

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow (cfs)
C_e = effluent concentration
Q_e = effluent flow (cfs)

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration). Acute wasteload allocations were determined using applicable acute water quality criteria (CMC: criteria maximum concentration).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

General warm-water fishery ammonia criteria apply [10 CSR 20-7.031, Table B].
Background Ammonia as Nitrogen for all receiving streams = 0.01 mg/L

Season	Temp (°C)	pH (SU)	Total Ammonia CCC (mg/L)	Total Ammonia CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

$C_e = ((Q_e + Q_s)\ C - (Q_s * C_s))/Q_e$

Summer

Chronic WLA: $C_e = (0.047 + 0.25)1.5 - (0.25 * 0.01)/0.047$
$C_e = 9.4$ mg/L

Acute WLA: $C_e = (0.047 + 0.0025)12.1 - (0.0025 * 0.01)/0.047$
$C_e = 12.7$ mg/L

$LTA_c = 9.4$ mg/L(0.780) = 7.3 mg/L
$LTA_a = 12.7$ mg/L (0.321) = 4.1 mg/L

Use most protective number of LTA_c and LTA_a

MDL = 4.1 mg/L (3.11) = 12.8 mg/L
AML = 4.1 mg/L (1.55) = 6.4 mg/L

Winter

Chronic WLA: $C_e = (0.047 + 0.25)\ 3.1 - (0.25 * 0.01)/\ 0.047$
$C_e = 19.5$ mg/L

Acute WLA: $C_e = (0.047 + 0.0025)\ 12.1 - (0.0025 * 0.01)/\ 0.047$
$C_e = 12.7$ mg/L

$LTA_c = 19.5$ mg/L (0.780) = 15.2 mg/L
$LTA_a = 12.7$ mg/L (0.321) = 4.1 mg/L

Use most protective number of LTA_c and LTA_a

MDL = 4.1 mg/L (3.11) = 12.8 mg/L
AML = 4.1 mg/L (1.55) = 6.4 mg/L

Season	Maximum Daily Limit	Average Monthly Limit
Summer	12.8	6.4
Winter	12.8	6.4

The Permit should contain a "re-opener clause" to address potential water quality issues should this or other monitoring indicate water quality standards are being exceeded due in part to this discharge. Should chlorine be used at this facility, the effluent shall be de-chlorinated to meet the referenced limits established to protect aquatic life.

Reviewer: Ed Pate
Date: May 24, 2006
Reviewer 2: Abbie Stockett - added oil and grease
Date: August 3, 2006
Unit Chief: Refaat Mefrakis

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data or anecdotal information is available that may affect the recommended monitoring and effluent limits, please forward these data and information to the author.